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ABSTRACT

A description is presented of a three-year pilot project conducted within the Primary-Junior Program at the Faculty of Education, University of Ottawa, Canada. The theoretical rationale upon which this alternative approach is based is outlined, and a description is given of the implementation of the approach. A report is also given of some findings from the data gathered during the project. Based upon humanistic philosophy, the program envisions a faculty of education as having the responsibility to assist teachers in conceptualizing the teaching profession as a lifelong learning career. The program is implemented from an andragogical perspective--an approach that is rooted in adult development theory and based on the principles of adult learning. The seven sections of this report describe the following aspects of the program: (1) the conceptual framework of the program; (2) possibilities of research into andragogy offered by the pilot program; (3) the relationship of the program to Ontario ministry education policy and direction; (4) the articulation of the program; (5) future development of the program; (6) program outline for 1987-88; and (7) retrieval of data related to research hypotheses and program evaluation of the pilot program. (JD)

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An Alternative Approach to Teacher Education: Preparing Teachers for Excellence in the Facilitation of Lifelong Learning

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PREFACE

"That faculties of education be inquiry-oriented both in the sense of doing basic educational research and in creating and reporting upon innovative experimental teacher education programs."

"The central point is that university professors especially, but not only those involved in graduate programs, should be publishing, documenting and disseminating all types of research and program knowledge ... The need is for the knowledge to be generated, widely accessible and assessed by peers."

Teacher Education in Ontario:
Current Practice and Options For The Future. p.74

Motivated and encouraged by the words from the position paper written by Dr. M. Fullan and Dr. F.M. Connelly, the authors present this report which describes a three year pilot project conducted within the Primary-Junior Programme at the Faculty of Education, University of Ottawa.

The purposes of this publication are to outline the theoretical rationale upon which this alternative approach is based; to describe the implementation of the approach; to report some findings from the data gathered during the three-year project and to outline the plans for 1987-1988.

During the past few years faculty members, associate teachers and principals have commented positively on the quality of candidates enrolled in the teacher education programme. One of the reasons for this high quality of candidate might be the strenuous competition for a position in the programme. It might also be based on the strong motivation, academic proficiency, maturity and widely varied related experiences of the

individuals who receive offers for admission into the programme. Recognizing these qualities or characteristics of the candidates has made it possible and maybe even necessary to attempt alternative approaches in teacher education programmes which can make individualization possible to a greater degree. It was in this setting and for these reasons that the pilot project was proposed, approved, and implemented.

Many people have contributed to the project: becoming teachers, faculty members and administrative officials, etc. The authors are grateful to Dean Yves Poirier, Associate Dean Gabriel Bordeleau, and English Teacher Education Coordinator Arden Walther for their continued support throughout the project. Our appreciation is extended to our colleagues at the Faculty, Professors Armstrong, Bennett, Belanger, Buchanan, Fortier, Gessaroli, Hanna, Madge, Slesar and Timleck for their assistance to us and for their expertise, guidance and support to the becoming teachers in the various courses in the programme. Philip Moorman, research assistant for year one and year two, and Rohan Bansi, research assistant during year three, deserve credit for preparing, administering, scoring and analyzing the various tests and scales used in the research component. Our thanks are extended to the teachers and principals in the various schools with whom our becoming teachers worked. We are grateful to our typist Mip Greger for the hours of work preparing this publication. For funding support, the writers thank the Faculty of Education.

More information may be obtained by writing to: Ruth Dempsey

Doug Greger

Bill Mutart

The English teacher education programme at the University of Ottawa is rooted in a view of education which affirms the person as its highest priority.

This programme prepares candidates to interact with learners as individuals, respecting their integrity and unique potential.

The programme recognizes learning as a lifelong process and is committed to preparing teachers for excellence in the facilitation of learning for contemporary schools and schools of the future.

- from Mission Statement 1985
University of Ottawa

INTRODUCTION

A Teacher Education programme based on a humanistic philosophy of education was first implemented in the Primary-Junior panel at the University of Ottawa in 1975. Humanism in this context is defined according to its age-old definition as *the doctrine of human dignity whose primary tenet is a transcendant view of wisdom* (Cantore, 1985). This programme has been very successful, gaining international recognition in 1981 with an award from the Association of Teacher Educators.

In 1983, a group of professors involved in this programme proposed the introduction of an andragogical approach based on adult learning principles. Inherent in this approach were the support structures required for a more individualized teacher education programme.

A proposal for a three-year pilot project, with a research component, was submitted by Professors Dempsey, Greger and Mutart, and accepted by the Administration in June 1984. The pilot project commenced September 1984. This meant that candidates entering the Primary-Junior panel now had two options - both rooted in a humanistic philosophy of education. These options were titled Model One (the original model) and Model Two (the model based on adult learning principles). Over the three-year period 80 students have completed the Model Two programme.

Programme Rationale

Education is a human activity and as such is rooted in time. Our time is characterized by transition and uncertainty. With the emergence of the post-industrial society our concepts of progress, development, social goals, quality of life, values, institutions, education, work, family and power are

gradually being redefined. A learning society suggests new assumptions about life and learning. Faculties of education, therefore, have a responsibility to assist becoming teachers *in conceptualizing the teaching profession as a lifelong learning career and learning as a way of being in the world over the lifecycle* (Dempsey, 1987). In the words of Cropley and Dave (1978), *"Curriculum changes in the light of lifelong education cannot be achieved without teachers who accept their value, and who possess the necessary attitudes, motives and skills"* (p. xxi).

Philosophical Orientation

Humanistic education seeks to provide the learner with the appropriate climate, opportunities and support required to develop excellence in the facilitation of learning. More specifically, humanistic education:

1. *accepts the learner's needs and purposes and develops experiences and programmes around the unique potentials of the learner;*

2. *facilitates self-actualization and strives to develop in all persons a sense of personal adequacy;*

3. *fosters acquisition of the basic skills necessary for living in a multicultural society. These include academic, personal, interpersonal communication and economic proficiency skills.*

4. *personalizes educational decisions and practices. To this end it includes learners in the processes of their own education via democratic involvement in all levels of implementation.*

5. *recognizes the primacy of human feelings and utilizes personal values and perceptions as integral factors in the education process;*

6. *develops in learners genuine concern and respect for the worth of*

others, and skills in conflict resolution (Combs, 1982).

Goals of the Programme

The goals of the programme are:

1. to develop the attitudinal qualities and the teaching skills required to facilitate and nurture excellence in lifelong learning;

2. to develop increased self-direction in learning, recognizing personal, educational, and growth needs, selecting appropriate learning resources, and evaluating personal progress;

3. to be able to critically assess professional activities relating to the learner, the educational system and educational research;

4. to be aware of, and to be able to work in, a variety of learning environments;

5. to be able to work as an integral and dynamic member of the learning community which includes the parents, social and community agencies, and any others involved in the learning process;

6. to identify, maintain and develop the personal characteristics and attitudes required for a teacher's professional life. These include: (a) awareness of personal strengths, potential, and limitations; (b) responsibility and commitment; (c) ability to accept, relate to, and show concern for others; (d) ability to respond energetically and creatively to changing educational needs.

Programme Approach

The Programme is implemented from an andragogical perspective - an approach which is rooted in adult development theory and based on the principles of adult learning.

PART I

THE CONCEPTUAL FRAMEWORK

The mission statement of the Faculty of Education at the University of Ottawa places special emphasis on the person, lifelong learning and the preparation of teachers for excellence in the facilitation of lifelong learning in the context of schooling. A programme congruent with this mission must therefore have these components as its chief cornerstone.

The conceptual framework for this programme is based on research from four different but interrelated areas of study. They are: (a) adult development theory; (b) lifelong education and lifelong learning; (c) andragogy and pedagogy; (d) self-directed learning including the concept of "learning how to learn".

A comprehensive overview of each component is not possible within the confines of this report. The intention is to identify the main tenets from each of the above areas of study and in a later section, "The Articulation of the Programme", to demonstrate how faculty members have endeavoured to shape programme implementation in a manner which marries theory and practice.

Adult Development Theory

The journey of human beings across time is difficult to map. In the early 1840s Quetelet, the founder of life-span psychology, initiated the science of life-span study. Still, child development remained its focus until after 1930 when Charlotte Buhler, Erik Erikson and others emphasized the specific development of personality (Bischof, 1976, p. 18). By the 1970s, however, the language of passages, life stages, cycles and transitions had become part of our everyday vocabulary. We learned that life didn't begin at forty but it didn't end there either. In the late 1980s, an adequate theory of human development still eludes us and perhaps

always will. We have, however, gained some basic understandings of how human beings develop. These must begin to inform our educational practice.

An Emerging View of Person

Today, the literature on adult development has identified a movement in the direction of *"increased control over one's thinking and one's life as a fundamental organizing concept of adult development"* (Allman, 1983, p. 119). The view of person which emerges suggests one: *(a) open to a potential for lifelong cognitive development; (b) capable of increasingly complex ways of thinking emerging from the paradoxical interdependence of the person and society; and (c) responsive to the physical, psychological and social patterns that affect most, if not all adults as they journey through life* (Erikson, 1959; Levinson, 1978; Gould, 1978; Allman, 1983).

Most of the present theories recognize that individuals do not necessarily proceed successively through all stages. For example, individuals may get stuck at an intermediate stage, proceed faster or slower than others or regress. Why? We still do not know. Also, few developmental changes occur as a result of time: change is not just additive but qualitative, implying *"both choice and necessity"* in responding to life experiences (Walsh, 1984, p. 2).

In addition, our emerging understanding of how human beings grow and become over the lifecycle, suggests that human development is an evolutionary process; *one by which people in the process of engaging life, both its challenges and difficulties, are invited to come home to themselves in a richer, deeper fashion over all of life's seasons* (Kegan, 1982). Adulthood suggests a vision of what human life may become: to engage life's seasons to their fullest is to be involved in life's most exciting and

dangerous adventure. Support is crucial, To support human becoming over the lifecycle is the task of education.

As educators, our fundamental task at this time, therefore, is to create an image of education that is adequate to the movement of human beings across time; one that truly supports our evolutionary potential and affirms our search for both integration and autonomy.

In the context of a learning society, this will involve education for everyone, everywhere, and for a lifetime.

Lifelong Education and Lifelong Learning

Generally, education carries an institutional or system connotation referring to the institutionalized system which provides the programmes, administrative structures, processes, settings and resources that support learning. Lifelong education refers to the educational structures that guide, influence or support learning for all of life's seasons. Says Cropley (1977) *"The key notion in lifelong education is that all individuals ought to have organized systematic opportunities for instruction, study and learning at any time throughout their lives"* (p. 21).

Dave (1975) describes it this way: *"Lifelong education is a comprehensive concept which includes formal, non-formal and informal learning extended throughout the life-span of an individual to attain the fullest possible development in personal, social and professional life. Lifelong education is not just preparation for life, it is an integral part of life. Learning and living are closely intertwined, each enriching the other. Thus, lifelong education becomes a continuous quest for a higher and better quality of life. But the quality of life depends upon the quality of learning acquired by an individual"* (p. 43).

The definition of learning is more complex. In fact, psychologists and educators are not agreed on what learning is. We can only *"observe it, note its course and its character"* (Kidd, 1973, p. 25). But according to Brundage (1980), *"adult learning refers both to the process which individuals go through as they attempt to change or enrich their knowledge, values, skills or strategies and to the resultant knowledge, values, skills, strategies and behaviors possessed and gained in that process"* (p. 5). Essentially, then, learning is an internal process of human development - an active self-transforming process.

From Education to Learning

Until very recently the process by which people went about learning was largely ignored. Our concern centered on teaching. The shift from "education" to "learning" was first legitimized by the International Commission on the Development of Education (1972) which noted *"that learning seemed always to outstrip efforts to educate"* (Thomas, 1983, p. 3). Hence, it proposed that the study of learning should become an independent field of study under the title "Mathetics". The focus of this new discipline is the learner and the learning process rather than the teacher and the teaching process. *"The shift"*, says Alan Thomas, (1983) proposed *"a revolution of 'Copernican' dimensions with the proper sun, 'learning', in the centre of the universe"* (p. 4).

Towards an Understanding of Lifelong Learning

Lifelong learning is not really new, only its study. Some, such as Newson (1977), equate it with self-directed learning. Others think of it more as a philosophical orientation. To date, we have no globally accepted

definition of lifelong learning. A very helpful step in this direction is provided by Mocker & Spear (1982). *They define lifelong learning as a system that is composed of four generic types of learning and propose a model consisting of a two-by-two matrix of learner and institution that represents four identified learning situations* (p. 2). Their model is illustrated below.

WHAT
(Objectives)

HOW (Means)	INSTITUTION	
LEARNER	Formal Learning	Nonformal Learning
	Informal Learning	Self-Directed Learning

Formal Learning - learners have no control over the objectives or means of their learning.

Nonformal Learning - learners control the objectives but not the means.

Informal Learning - learners control the means but not the objectives.

Self-Directed Learning - learners control both the objectives and the means.

In this model the locus of control, in relation to the goals and means of learning, provides the operational definition for lifelong learning. In the authors' words, *"If control is a key characteristic of adulthood, then one way of conceptualizing lifelong learning is to use the idea of control as the basis of classifying the various types of lifelong learning"* (p. 1). Hence, the work of Mocker and Spear (1982) affirms what adult development theory suggests: the necessity for individuals to assume responsibility for the decisions that shape their lives.

Implications for Practice

Since it is imperative that our understanding of human development inform our practice, our challenge becomes how to structure learning in a manner which empowers and affirms the need of learners to take responsibility for their own lives and their own learning.

Our answer has been to adopt what Mocker and Spear (1982) identify *as informal learning, with the institution retaining control of the learning objectives and the learner controlling the means by which these objectives are mastered.* This allows us to provide a learning environment that respects the integrity of the concept of autonomy for the learner, and at the same time affirms the realities of learning in an institutional setting and with academic rigor. Hence, our approach is not fully self-directed but a movement towards self-direction which we feel is most appropriate to our present educational context and to the contemporary school settings in which most of our graduates will practise.

Pedagogy - Andragogy

The root meaning of pedagogy is derived from the Greek word pais - child - and agein - to lead or accompany. In its turn, andragogy is derived from the Greek word aner - adult - and agein - to lead or accompany.

Andragogy was coined by the German teacher Alexander Knapp in 1933 to describe the educational theory of Plato. It was first introduced into the U.S. in the 1920s by Lindeman. The concept was brought into prominence in the 1960s and 1970s by Malcolm Knowles (1970) with his book The Modern Practice of Adult Education: From Pedagogy to Andragogy.

Knowles (1980) defined andragogy *as the art and science of helping adults learn and by 1984 concluded that pedagogy and andragogy are best*

viewed as on a continuum, with andragogy including pedagogy (p. 12).

Still another perspective, that of andragogy and pedagogy as two ways of accompaniment, is rooted in the western European literature on this subject. *Andragogy is defined by the adult-adult relationship and involves an adult assisting an adult to a more refined, competent and enriched adulthood. Thus, although similar strategies may be used in assisting the child and the adult, the two types of situations differ in their meaning and their ultimate aims* (Yonge, 1985).

Andragogy and pedagogy, therefore, may be viewed as two sets of assumptions about learning (Knowles, 1980, 1984) or,*as two ways of being with the learner (accompaniment)* (Yonge, 1985). Mezirow (1981) defined andragogy succinctly as *"an organized and sustained effort to assist adults to learn in a manner that enhances their capability to function as self-directed learners"* (p. 136).

Assumptions of Andragogy

Four assumptions form the principles and practices of andragogy. These are: *(a) as persons mature, their self-concepts change from dependence toward increased self-directedness; (b) adults accumulate a variety of experiences that provide rich resources for learning; (c) adults' readiness to learn is increasingly rooted in the developmental tasks of their societal roles and is directed toward problem-solving; (d) the time perspective of adults is concerned with learning that can be applied now rather than later* (Knowles, 1980, p. 45).

Implications of Andragogical Assumptions for Educational Practice

The following two examples are provided to illuminate the implica-

tions of andragogical assumptions for educational practice. Their specific application to the pilot programme is also illustrated.

FROM ADULT DEVELOPMENT THEORY

AS ADULTS MATURE, THEIR CONCEPT OF SELF BECOMES THAT OF A SELF-DIRECTED PERSONALITY. THEY SEE THEMSELVES AS BEING ABLE TO MAKE THEIR OWN DECISIONS AND FACE THE CONSEQUENCES. AT THIS POINT PEOPLE ALSO DEVELOP A DEEP PSYCHOLOGICAL NEED TO BE SEEN BY OTHERS AS BEING SELF-DIRECTING.

ADULT LEARNING PRINCIPLE

1. ADULTS LEARN BEST WHEN THEY ARE TREATED WITH RESPECT, AS SELF-DIRECTING PERSONS.
2. ADULTS LEARN BEST WHEN THEY PARTICIPATE IN THE PLANNING AND DIRECTION OF THEIR LEARNING ACTIVITIES.
3. ADULTS LEARN BEST WHEN THEY PARTICIPATE IN THE EVALUATION OF THEIR OWN LEARNING.

ANDRAGOGICAL PRACTICE

LEARNERS ARE REQUIRED TO DESIGN A LEARNING PLAN FOR EACH OF THEIR COURSES WHICH INCLUDES AIMS AND OBJECTIVES, LEARNING STRATEGIES AND RESOURCES, EVALUATION AND VERIFICATION CRITERIA AND PROCEDURES

FROM ADULT DEVELOPMENT THEORY

AS PEOPLE GROW AND DEVELOP THEY ACCUMULATE A RESERVOIR OF EXPERIENCE THAT BECOMES AN INCREASINGLY RICH RESOURCE FOR LEARNING - FOR THEMSELVES AND FOR OTHERS.

ADULT LEARNING PRINCIPLE

ADULTS LEARN BEST WHEN THEIR LEARNING IS RELATED TO THEIR EXPERIENCE.

ANDRAGOGICAL PRACTICE

LEARNERS ARE REQUIRED TO DO AN ENTRY RATING FOR ALL COURSES ON ENTRY INTO THE PROGRAMME. THE ENTRY RATING IS CONFIRMED BY THE SUBJECT FACULTY ADVISOR. LEARNERS THEN PROCEED WITH THIS ENTRY RATING AS THEIR STARTING POINT FOR LEARNING.

Exploring The Nature of Adult Learning

Mezirow (1981) suggests *that the theory of knowledge proposed by philosopher-sociologist Jurgen Habermas best complements andragogy. Habermas's domains of learning are rooted in different aspects of social existence, world, interaction, and power. They involve learning for task-related competence, learning for interpersonal understanding and learning for perspective transformation* (p. 4). Too often educational systems stress learning for the first domain at the cost of learning for interpersonal understanding and learning for perspective transformation.

Learning for the second domain, or social interaction, supports an educational approach which focuses on helping learners interpret the ways they and others construct meanings; ways they typify and label others and what they actually do and say in interaction with others.

Perspective transformation or learning for the third domain is the type of learning considered most unique and characteristic of adults. Indeed, Habermas views this as an "emancipatory process", a process which demands change in our meaning perspectives. Educating for perspective transformation involves a process of becoming critically aware of how and why the structure of psycho-cultural assumptions has come to constrain the way we see ourselves and our relationships, reconstituting this structure to permit a more inclusive and discriminating integration of experience, and acting upon these new understandings (Mezirow, 1981, p. 6).

For Gould (1978) adult development also involved moving away from *" illusions of safety"* established in childhood. Each step that is taken: leaving home, establishing a career, getting married, etc. is followed by a natural and normal period of grief and discomfort. Illusions are confronted in accordance with a regular sequence which roughly demonstrates a

correspondence with age. Gould sees *maturity as a developmental process of movement through the adult years toward meaning perspectives that are progressively more inclusive, discriminating and more integrative of experience* (Gould, 1978; Mezirow, 1978)

Perspective transformation does not involve telling the learner what to do or prescribing a correct course of action. Rather, learning for perspective transformation provides the learner with alternatives for giving life direction and meaning, growing out of an in-depth understanding of the learner's historical situation. In addition, it opens the learner up to a critique of psychic, social, and institutional realities - realities such as ignorance, selfishness, bureaucracy and exploitation - in light of their support or non-support for human becoming.

This *"quest for critical reflection and the creation of personal meaning after due consideration of a full range of alternative value frameworks and action possibilities" prevents us from equating self-directed learning simply with its methodology* (Brookfield, 1985, p. 30). In other words, control alone is not sufficient for learner autonomy, informed decision-making among learning formats and possible activities is also required.

Implications for Practice

Education for all three domains is integral to andragogy and provides a framework for the more complex and integrated approach required for teacher education today.

Educating for social interaction, for example, demands the study of organizational development which in turn helps young teachers to *"understand their place in a social milieu that they will be attempting to change"* (Joyce & Clift, 1984, p. 13). They are, therefore, better able to partici-

pate in school renewal efforts, including the creation and implementation of innovations.

Educating for perspective transformation allows becoming teachers to *obtain control over their behavior and to understand what is happening to them as people as they learn about their profession and how to perform effectively"* (Joyce & Clift, 1984, p. 13).

Towards Self-Directed Lifelong Learning

Self-directed learning is viewed by many as a solitary enterprise. Not so; Dave (1975) defines self-directed learning as *"the planning and management of learning by individuals (either individually or collectively) to accomplish their personal, social and vocational development by recognizing specific learning needs from time to time and fulfilling them through suitable techniques, resources and learning opportunities"* (p. 44). Indeed, self-directed learning is a many-faceted process involving several components.

Learning How to Learn

One of the essential components of self-directed learning is "learning how to learn". The importance of this concept has been stressed by a large number of educational leaders including Dewey, Rogers, Bruner, Houle, Bergevin, Knowles and Tough. Smith (1983) suggests that learning how to learn involves learning in three modes: (a) on one's own; (b) in a group (collaborative); (c) in an institutional mode or guided learning by an expert (p. 22).

Learning on one's own or self-learning involves learning from a book, a journal, or observation of certain phenomena. Collaborative or inter-learning is *"a process of group learning whereby two or more persons learn*

from one another through exchanging frequently their roles as teachers and learners and without feeling the heavy weight of the teacher-learner hierarchy" (Dave, 1975, p. 45). Learning in an institutional setting or guided learning from an expert may be most beneficial in the early stages of learning a new discipline or a professional competency skill. However, fundamental to this mode of learning is moving learners toward independence and assisting them to use guided learning to appropriately complement their own learning needs.

The specific learning mode selected by the learner depends on the learning need, the learning situation and the resources available. Self-directed learning includes developing the ability to choose appropriately, an ability which is certainly crucial to teachers who will be required to be involved in lifelong professional development.

Developmental Learning Patterns

Loacher and Doherty (1984) identify three phases negotiated by learners in response to basic issues that arise as they move toward self-direction:

1. *Phase one: Internalizing learning (as learners realize that learning is a change in the self).*
2. *Phase two: Transferring learning (as learners realize that newly learned abilities can be adopted to varying situations where they have power to effect change).*
3. *Phase three: Directing learning (as learners realize that they can take charge of the learning process as they do other aspects of their lives and thus begin to take responsibility for integrating and to some extent directing changes in themselves*

and their world! (Knowles & Associates, 1984, pp. 101-119).

Changing Learning Maps

Endings, as William Bridges (1980) suggests, *are never easy. Endings, as they relate to learning, are no different. Griffin (1982) has identified five substantial shifts in perspective learners must make in adapting to the new learning map suggested by andragogy. Learners must rethink their concept of knowledge, of learning, of peers, of teacher and of whom they are as learners* (p. 127). Initially, this presents a challenge, Therefore, orientation sessions are imperative to provide the philosophical basis and educational principles underlying the new learning map, as are sessions that offer opportunities for practising the new skills, and that outline the learning strategies required for successful implementation.

Learner-Professor Relationship

Andragogy also suggests a fundamental change, in the learner-professor relationship. Within the context of a learning situation, for example, a professor may be called upon to do one or several of the following: confirm, direct, facilitate, monitor, become a co-learner or act as a resource person. Thus, the learning relationship becomes truly dynamic.

Schooling and Lifelong Education

Our faculty mission statement states: *"The programme recognizes learning as a lifelong process and is committed to preparing teachers for excellence in the facilitation of learning for contemporary schools and schools of the future"*. Can schools develop lifelong learners? Certainly, but lifelong education requires a reconceptualization of schooling.

Lifelong education is a goal which includes principles for organizing schooling to facilitate the process of lifelong learning, and to influence it according to special goals and ideas. One aim of lifelong eduation , therefore, is *to modify schooling in order to shape and influence the kinds of learning that occur throughout life* (Cropley, 1988).

In a lifelong education-oriented framework the task of schooling will be to develop people who are capable of functioning under minimal supervision, and who are willing and able to adapt and adjust to a fast-changing world. The curriculum will be organized to support the development of the skills of self-responsibility, ownership of learning, self-critical analysis, flexibility and independence. Indeed, the school's raison d'être will consist of helping learners to master the skills of learning, to develop the attitudes that will keep them open to lifelong learning, and to be confidently at home with themselves and their world.

The Role of the Teacher in Lifelong Education

Lifelong education implies new roles and functions for teachers, requiring them to be with learners in fundamentally different and varied ways. *The fundamental role of the teacher will be to foster the learner's ability to carry out their own investigation of knowledge, relating what they learn to their own existing knowledge and future need, and analyzing and evaluating their own learning as they go* (Cropley, 1977).

The Teaching Profession as Lifelong Career Development

The teaching profession in the context of lifelong education must be reconceptualized and understood as lifelong career development. In this context, the preservice programme is seen as the first or initial phase in this journey of lifelong learning. Any adequate model of teacher education

must, therefore, affirm the rhythm and interconnectedness of all of life's seasons by inculcating the attitudes, knowledge, and skills required *"for lifelong learning and experimentation"* (Joyce & Clift, 1984, p. 14).

Conclusion

Thus preservice programmes must be conducted in a manner that demonstrates flexibility and provides the support required to nurture learning in oneself and others over all of one's teaching career. In the words of Joyce and Clift (1984), *"The major accomplishment of teacher preparation should be to develop the capacity for lifelong learning and experimentation"* (p. 14).

Such a model of teacher education also opens up naturally many avenues for continuing inservice of new graduates in collaboration with school boards and other community organizations.

PART II

PILOT PROGRAMME: POSSIBILITIES FOR RESEARCH

Since the 1970's growth in the acceptance and usage of andragogy has been rapid. The professional literature on nursing, social work, and other groups is replete with accounts of its use (Darkenwald & Merriam, 1982).

Debate continues as to whether andragogy should be defined as a theory, approach, method or technique (Cross, 1981; Davenport & Davenport, 1984). Our programme defines andragogy as an approach because it embodies and expresses a philosophy of education and is based on the assumptions and theories previously outlined. In this context, andragogy does not affirm or exclude any particular method but chooses the method to complement the specific learning goal.

Questions and Issues for Future Research

Involvement in a programme such as this one opens up a broad range of areas and topics for faculty research.

1. What are the personal characteristics that facilitate self-directed learning?

2. Can skills that improve the ability to become a self-directed-learner be taught or improved?

3. What methods of evaluation are most conducive to self-directed learning?

4. What role does the environment play in the learner's organizing of a learning project?

5. What is the relationship between an andragogical approach to teacher education and future teacher effectiveness?

In addition, through this type of research, a faculty of education can make a significant contribution to the quality of the learning environment in the university community as a whole. After all, all teaching at the

university involves dealing with adults; the same needs apply throughout all faculties.

Teachers as Researchers

Many recommendations have been made for the inclusion of a research component in the teacher preparation curriculum. For example, becoming teachers might be taught how to use a simple well-focussed observation instrument in relation to student-teacher interactions. Becoming teachers might do peer observations and give each other feedback.

To facilitate this process becoming teachers in the pilot programme are required to master a competency related to research techniques in education. In addition, the pretests and posttests required by faculty research are presented and explained to becoming teachers in the larger context of the implications of research findings for classroom practice.

Indeed, this programme also complements highly the approach to research suggested by David E. Hunt in his recent book, Beginning With Ourselves. Hunt (1987) suggests *that all theory and practice must begin with the person; with reflection on the nature of personal experience.*

PART III

RELATIONSHIP OF PILOT PROGRAMME TO ONTARIO MINISTRY OF EDUCATION POLICY AND DIRECTION

Since we are educating teachers primarily for Ontario, it appears important and even essential that teachers be educated in a manner that complements Ministry policy and direction for education in Ontario.

Complementary Aspects of Programme

In two crucial ways, the pilot programme closely complements the Ontario Ministry of Education policy and direction: in its philosophical orientation, and in the processes required of teachers for curriculum implementation.

The goals of education in Ontario as outlined by the Ministry of Education are increasingly directed toward the development of independent lifelong learners and problem solvers.

> *Recognizing the diversity of individual abilities and interests, the Ministry views the learner as an active participant in education who gains satisfaction from the dynamics of learning. The concept of the learner as a mere processor of information has been replaced by the image of a self-motivated, self-directed problem-solver, aware of both the processes and uses of learning and deriving a sense of self-worth and confidence from a variety of accomplishments.* (Ontario, Ministry of Education and Ministry of Colleges and Universities, 1980, p. 2).

The processes advocated by the Ministry, for example, in Programming for the Gifted (1985), mirror those required of becoming teachers in the Alternative approach. In the section titled, Learning Beyond the Classroom (p. 101), learners are invited to plan, to implement, and to evaluate courses with a view to encouraging them to: (a) accept responsibility for their learning, (b) assume ownership of their learning, (c) gain power over their learning.

The types of evaluation strategies suggested are also complementary. They include:

1) *teacher-evaluation,*

2) *co-evaluation: pupil-teacher, pupil-peer, and pupil-community resource person;*

3) *self-evaluation (reflective)* (p. 31).

Self-evaluation it is suggested, will encourage pupils to examine their strengths and weaknesses in an unthreatening way. It will lead them to appreciate their own personalized way of learning and to assess the degree to which they have mastered their own systems of learning (p. 29).

Implications for Becoming Teachers

It appears reasonable to conclude that teachers who have used these processes in their teacher education programme will, when required to implement them in their own classrooms, do so with increased ease and insight.

PART IV

THE ARTICULATION OF THE PROGRAMME

The pilot project was organized as a mutually responsible and cooperative enterprise designed to use creatively the abundance of educational and community resources available to assist becoming teachers in their journey of lifelong learning.

The Pilot Programme and the School Milieu

Faculty members met regularly with associate teachers throughout the period of the pilot project. During these meetings teachers were informed of the philosophical basis and structure of the programme. The associate teachers were highly supportive. Indeed, throughout the pilot project they have gradually assumed a sense of ownership and responsibility for the programme, opening up new channels of communication with the university leading to expanded and enriched involvement by becoming teachers in the total life of the school community.

The Practicum

No changes were made in the practicum component of the programme for the pilot project. No difficulties were encountered. If anything, learners appeared increasingly committed to shaping their practicum to complement their learning needs. In this context the method by which the components of the programme are organized to provide frequent opportunities to reflect on and integrate experience may be significant.

Courses Defined as Competencies

As a first step in our journey towards self-direction the courses as previously outlined were redefined as competencies. Competencies were seen

to include three components: attitude, skill and knowledge.

Faculty members, however, believe that course content would be more appropriately and richly defined as problems. Such a definition would better complement the wholistic, integrated and multidisciplinary aspects of an andragogical approach. The four major knowledge areas of teaching and schooling as delineated by Joyce and Clift, (1984) might for example provide focal points for problem solving: *(a) the design of schools, (b) the design of curriculum, (c) the design of teaching, and (d) the nature of learners* (p. 12). Such direction, however, was not available to us for the pilot project.

Organization of the Programme

The programme was organized in three blocks: Incoming Block, Developing Block and Outgoing Block (this concept is adapted from the work of John Goodlad (1984) and Maurice Gibbons (1974)).

Incoming Block (Sept. - end of Oct.)

In the first block the becoming teachers: (a) became familiar with the philosophical orientation and content of the programme as outlined in the Professional Development Guide; (b) became a member of a counselling group; (c) became familiar with the learning resources of the university, the schools and the community; (d) received input on a variety of learning strategies that complement the learning plan design and development; (e) worked with their assigned counsellor and other faculty members in identifying their entry ratings and clarifying their learning objectives; (f) completed their first field studies'session in the schools; (g) designed, had

approved, and began the process of implementing their learning plans.

Developing Block (Nov. and Dec.)

In the developing block the emphasis was on focussed competence. The learner became skilled and knowledgeable in the required competencies. Ideas and assumptions gained were tested in a variety of learning environments during the twenty days of field studies prior to Christmas. Opportunities were provided to become familiar with the learning community and *to demonstrate the caring, empathetic attitudes that are characteristic of excellent facilitators of learning* (Rogers, 1969).

The Outgoing Block (Jan. - April)

In the outgoing block the emphasis shifted to the learner as teacher and facilitator. During this period the becoming teacher was required; (a) to complete eight weeks of practical field experiences under the supervision of a competent associate teacher, and (b) complete the "Learning Portfolio" and submit it to his or her counsellor on or before a designated date.

Methodology: The Learning Plan

Learner-centredness is characteristic of an andragogical approach to education. The learning plan is therefore seen as a central focus. A plan is designed for each course which includes: (a) learning objectives, (b) learning resources and strategies, (c) evidence of accomplishment, (d) criteria and means of validation, and (e) a bibliography.

Supports for The Learning Plan

A Professional Development Guide was developed to assist learners, and included the following: (a) rationale and philosophical orientation; (b) one entry rating competency profile for each course; (c) competencies required for each course; (d) a competency planning implementation guide; (e) guidelines for preparing the final summary reflection; and (f) evaluation forms (sample formats which learners may use - for example, for peer evaluation).

The Counselling Group

1. Each learner became a member of a counselling group composed of 10-13 people with a faculty member as a facilitator.

2. The group met weekly when becoming teachers were on campus.

3. The counselling group became the focus for an enormous amount of peer group learning.

4. The faculty member or facilitator for each counselling group monitored the overall progress of each becoming teacher's learning programme.

Assistance from Faculty

Faculty subject advisors assisted becoming teachers in the design and implementation of their learning plans. To facilitate this process a monitoring schedule for individual learners was established and course support structures were put in place. Different learning modalities were also explored.

COURSE SUPPORT STRUCTURES

Course outlines identifying priority areas for study.
Theme, unit or topic learning guides giving concrete directions for learning are also made available.

An inventory of all existing relevant resources is provided (with opportunities for becoming teachers to add to it throughout the year as they discover new resources).

LEARNING MODALITIES

1. studying texts, course materials, periodicals, learning guides;
2. attending workshops and seminars;
3. viewing films and video tapes;
4. clinical experiences in a variety of classrooms and settings;
5. interviewing students, principals, consultants, trustees, parents, community agency personnel;
6. studying instructional kits and manuals;
7. doing case studies;
8. attending parent-teacher and school board meetings;
9. presenting seminars and workshops for a group of peers;
10. attending Professional Development days at local school boards;
11. maintaining a learning log or/and journal;
12. attending sessions by faculty subject advisors presented at the request of faculty or at the request of the learners.

The close monitoring of learning implicit in the programme provided learners with the amount and kind of direction required, especially in the incoming and developing blocks. It also allowed faculty members to identify problems early and to respond to them appropriately.

Regular class sessions related to the required competencies were provided by faculty for the regular programme. Learners from the pilot project could choose to use these sessions as part of their learning plan. Some sessions, however, were compulsory.

Entry Rating Identification

Adult learning principles suggest *that as persons mature they accumulate a variety of experiences that provide rich resources for learning* (Knowles, 1980, p. 45). Assessment of prior learning, therefore, provides the starting point for individual learning. Such activity leads to identifying and planning progressions to successive phases and, when a learner chooses, to greater integration of learning from a programme perspective. Entry ratings were confirmed by the subject faculty advisor. Various assessment techniques were used.

ASSESSMENT TECHNIQUES PRESENTLY IN USE (others are in the process of being developed)	submission of prior course work, exams, essays
	documentation of completed projects dealing with specific subject areas
	oral quiz with faculty subject advisor

Learning Resource Centre

The learning resource centre had a collection of relevant material which the becoming teachers could use to complement their learning needs.

Learners were required to develop a similar home resource file to assist them to organize in meaningful fashion the materials and information collected furing the programme and beyond.

The learning resource centre also served as a meeting place and information distribution centre for becoming teachers.

Evaluation

The evaluation component of the programme included both summative and formative evaluation. *Lifelong education, however, puts the emphasis on formative evaluation, which serves a diagnostic, corrective and guiding pur-*

pose (Cropley and Dave, 1978).

Modes of evaluation used in the pilot project include evaluation through observation, feed-back from faculty, peers, teachers, consultants, principals, students, parents and community resource people, assessment of the extent of transfer of new learning to relevant real-life situations, as well as other traditional and alternative ways of evaluating learning and personal growth. Some measure of self-evaluation was considered an essential element of the overall evaluation process.

Learners were responsible for choosing their own modes of evaluation in consultation with faculty subject advisors. Since specific grades for each course were required by the university administration, learners used the criteria for marks as outlined in the university calendar.

PART V

PROPOSING THE VISION

LOOKING TOWARDS THE FUTURE

The pilot project is now complete. The faculty members involved have found the project to be enormously exciting, and a very rich learning experience from both a personal and professional perspective.

Commencing in September 1987, an alternative approach to teacher education based on the principles of andragogy will be offered for 50% of the candidates accepted in the programme. Faculty members welcome the challenges ahead and look forward to further research in this area.

Projected Programme Changes

The primary changes presently envisioned for 1987-1988 consist of (a) a reduction in regular class lectures; (b) the further delineation of a required monitoring schedule for each learner; and (c) the introduction of learning guides for all courses, and learning resources modules as a component of the course PED 3103, Curriculum Design and Evaluation.

Compulsory Class Sessions

A limited number of compulsory sessions will be required in all subject areas. The exact number will be determined by each subject advisor. Almost all of these will be conducted as components of the incoming block.

The Monitoring Process

Becoming teachers must accept the primary responsibility for charting their journey toward achieving their learning goals. However, academic progress is supported and monitored by counsellors and faculty subject advisors. To facilitate this process, a monitoring schedule will be further delineated.

MONITORING PROCESS

Becoming teachers are required to meet individually with faculty. A monitoring schedule is drawn up by becoming teachers and each faculty subject advisor during programme orientation.

Becoming teachers chart their learning in a progress report booklet. Faculty subject advisors provide comments and sign this booklet each time they meet with individual learners.

Modularized Curriculum

A modularized curriculum provides the flexible time and direction that can be scheduled to increase a variety of learning experiences. Learning resource modules for PED 3103, Curriculum Design and Evaluation will be introduced in September. These modules address specific course topics, provide objectives and learning activities, and identify key resources. In the first year of their implementation, they will provide jumping-off points for each topic in the area of curriculum design and evaluation. The faculty subject advisor for curriculum will work on their further elaboration for year 2 of their implementation.

Further Programme Development

Any education worthy of human beings must propose a vision of what human beings and human life might become. The present andragogical approach to teacher education affirms a lifelong learning continuum and provides the rich textural educational framework required for the evolution of such a programme. To facilitate this process a programme development plan is proposed.

The Programme Development Plan

The Programme Development Plan includes the elements of the pilot programme, but further extends them to permit and encourage programme development and the systematic evaluation of a more comprehensive approach to teacher education.

Careful consideration of the content (what will becoming teachers learn?), the delivery systems (how, where and when will becoming teachers learn?) and the resources (who will facilitate the learning?) is required.

It is also essential to conduct both formative and summative on-going evaluations of each of these elements and their inter-relationships. Since teacher education is by its nature dynamic and evolutionary, an assessment system needs to be developed which will identify the priority focal points for change and innovation on an ongoing, cyclical basis.

Figure 1a represents the elements of the programme development plan and demonstrates their inter-relationships. Figure 1b indicates the ingredients within each element.

ELEMENTS OF THE
PROGRAMME DEVELOPMENT PLAN

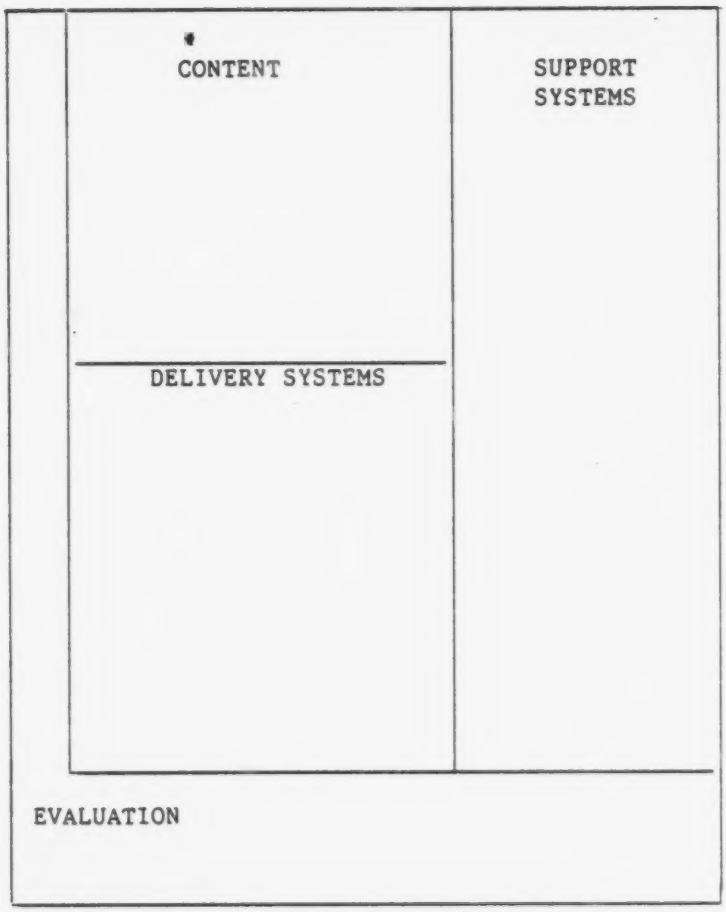


Figure 1a

ELEMENTS OF THE
PROGRAMME DEVELOPMENT PLAN

CONTENT

Course outlines/learning objectives/learning guides

Learning modules/ activities and resources

Pre/post Assessment Tools

Progressive levels of complexity

Content defined as problem solving

DELIVERY SYSTEMS

Lectures (core content)

Experience-based learning

Differentiated entry points

Course integration

SUPPORT SYSTEMS

Becoming teachers

Faculty as
- Facilitators
- Subject advisors
- Counsellors

Resource centre

Field placements
- Co-operating teachers
- Associate teachers
- Liaison

Educational Community
- Consultants/principals
- Professional associations
- Parent groups

Community
- Government agencies
- Embassies
- Travel agencies
- Museum/public libraries
- Multiculturalism groups
- Social agencies

University life
- Student council/ activities

EVALUATION

Formative

Summative

Of Elements: Product - content
Process - Delivery systems
Support systems

Of inter-relationships between elements

Figure 1b

PART VI

THE PROGRAMME FOR 1987-88

The Programme for 1987-88

It is incumbent upon those involved in teacher education that any innovative programme be based on sound theoretical rationale. The conceptual framework previously described seems to provide such a rationale.

The work of Malcolm Knowles and Allen Tough indicates, *"that there is convincing evidence that people who take the initiative in learning (proactive learners) learn more things and learn better than do people who sit at the feet of teachers passively waiting to be taught (reactive learners)".*

A group of professors involved in teacher education at the University of Ottawa plan to implement the following programme in 1987-88. The programme, based on andragogical principles leading to self-directed learning has been planned taking into account the following:

a) the conceptual framework;

b) the evaluations of candidates over the past three years;

c) refinements to the programme based on observations and data gathered over the past three years.

Scenario:

In order to set the stage for the proposed programme certain facts should be shared.

Selection of Candidates

Seventy-eight candidates have been invited to the Primary/Junior panel for 1987-88. These seventy-eight potential teachers were invited from some four hundred and fifty potential candidates. The invitations were sent to those who scored highest on the selection procedure criteria - undergraduate degree marks and a candidate's statement of experience. Materials were sent to the seventy-eight candidates in an attempt to describe each of the formats - Model One which is the regular programme and Model Two which is the alter-

native programme. Candidates were requested to send by mail their choice of models. In addition candidates who could attend were invited to meet with faculty and graduating candidates to further pursue the details of each model before they made their choice. Thirty-nine candidates will pursue their studies in each of the two models, determined as much as possible, by their choice.

Teacher Education Programme

The programme at the University of Ottawa is an eight month programme operating from September to April. It includes twenty day of FIELD STUDIES in the schools and eight weeks of PRACTICAL FIELD EXPERIENCES for all candidates. All candidates are expected to acquire competencies through the delivery of ten three-credit courses.

Staffing

Some professors will work exclusively with Model One candidates while others will work exclusively with Model Two candidates. Some professors will work in both models.

Scheduled Classes

A limited number of classes will be made available to candidates enrolled in the Model Two format. Candidates will be expected to attend approximately six classes in each three-credit course throughout the year (candidates in the Model One format have eighteen classes scheduled for each three-credit course). These Model Two classes will be designed to provide professors the opportunities to:

(a) share with candidates some minimum essentials related to each course;

(b) assist candidates as they move through the development and

implementation of their personal learning plans;

(c) discuss with candidates, more specifically, the competencies they are expected to acquire in each course.

Orientation Sessions

Early in September candidates enrolled in the Model Two format will be expected to attend several orientation sessions. These orientation sessions will be conducted by the professors who are heavily involved with Model Two candidates and will include information related to the conceptual framework, the implementation strategies through learning plan development, the resources available for candidates, and the evaluation aspects. (APPENDIX A)

Competency Entry Forms

One of the candidate's first steps in the Model Two format will be to indicate her perceived present level of achievement related to each competency in each course. On a scale of 0-5 the candidate, possibly in conjunction with a professor, will place herself at the appropriate level in September. In April each candidate will indicate to what point she has moved on the 0 to 5 continuum. It is expected that the scores recorded in September will be low but there may be some higher scores in particular competencies based on candidate's past educational background and experience. (APPENDIX B)

Learning Plans

A learning plan for each three-credit course will continue to be a fundamental part of the Model Two format. Each professor will retain the responsibility of indicating, as a part of the plan, those competencies that are required from each candidate. Candidates will continue to develop stra-

tegies for the acquisition of competencies; basically the HOW, the WHEN, the WHERE. Candidates will continue to make use of the many resources available which will permit the acquisition of the stated competencies. Candidates are expected to examine the stated competencies for each course and to make decisions regarding these questions:

WHAT AM I GOING TO LEARN? (Objectives)

HOW AM I GOING TO LEARN IT? (Strategies and Resources)

HOW AM I GOING TO DEMONSTRATE THAT I HAVE LEARNED IT? (Verification)

(APPENDIX C)

Role of the Professor

In addition to the limited number of large group presentations referred to earlier, each professor will be scheduled into a "professor availability" schedule. These hours will be an integral part of each professor's teaching workload and this schedule of availability will be provided for each candidate.

The professor availability time is specifically designed to permit one-on-one or small peer group-to-one interaction between the candidate and the professor.

At these scheduled times candidates will have the opportunity to dialogue with the professor about:

(a) the development of individual learning plans;

(b) candidate's progress throughout the year;

(c) affirmation/confirmation of grade for each course.

It will be possible for professors to meet with groups of candidates to address common or specific needs if these become apparent.

These scheduled sessions provide a valuable resource for each candi-

date as she works towards competency acquisition. Each professor has much to offer in terms of expertise, guidance, encouragement, experience, and motivation.

Resources

In addition to the rich resource that each professor provides, continued efforts will be made to bring to the attention of candidates the many other resources available as they develop and implement their personal learning plans. Some of these that the faculty will purposefully bring to the attention of candidates based on three years of programme observation/evaluation include:

(a) formation of peer groups;

(b) extensive use of the university's resources including libraries, learning resources, computer availability, etc. (a day early in September has been set aside as a "FOCUS ON RESEARCH" day when various resource personnel will bring to the attention of candidates the many resources the university and educational community provide);

(c) a resource room available specifically for Model Two candidates housing reports, curriculum guidelines, papers, materials, etc. of value to potential teachers;

(d) relevant handout materials;

(e) visitations to schools to meet with principals, teachers, pupils:

(f) workshops, seminars, conferences offered within the university and in the educational community;

(g) special educational projects;

(h) learning modules (materials developed by professors permitting individual progress through a course);

(i) resources that presently may be unknown to us but do exist in the community.

Evaluation Procedures

At the end of the teacher education programme all candidates must receive a mark for each three-credit course. Model Two candidates will be expected to assume a major responsibility in the determination of each mark. Besides being expected to determine a target mark and providing the verification for the mark, candidates will be aware that the professor for the course must affirm/confirm the final decision made related to the grade. Candidates will be encouraged to examine a wide variety of possible evaluative techniques including self-evaluation, peer evaluation, outside agency evaluation, contract evaluation, etc. Each candidate will be required to hand in to her counsellor/professor a LEARNING PORTFOLIO in late April. This portfolio will contain:

(a) completed competency entry rating form;

(b) completed learning plans for each course including a mark and the professor's signature to confirm the mark;

(c) a bibliography for each course;

(d) a summary reflection of the year's programme (four typewritten pages outlining each candidate's reflections on the choice of Model Two, the learning plan, interactions with faculty, use of university and community resources, learning strategies, field studies and practical field experiences, programme rating);

(e) the completed Cheren Competency Implementation Scale (designed to assess an individual's programme planning and implementation competencies. Candidates rate their level of proficiency, using a five point scale on seventeen items, from ability to assess one's goals and objectives to effective use of resources).

Learning Model

APPENDIX D

APPENDIX A

(1) IMPLEMENTATION STRATEGIES

- Attend classes
- Study of texts, journals, course materials
- Present workshops or seminars
- View films, video tapes
- Visit classrooms
- Maintain a learning journal
- Interview: principals, consultants, superintendents, teachers, trustees, parents, students, agency representatives
- Participate in classroom practica
- Attend conferences
- Study instructional kits
- Do case study
- Role-play
- Attend P.T.A. meetings
- Demonstrate a teaching technique
- Attend P.D. sessions
- Discuss with peers or learning partners
- Design and implement school program for individual or group under the direction of school personnel

(2) EVIDENCE AND VERIFICATION

- Self evaluation
- Peer evaluation
- Teacher evaluation
- Principal evaluation
- Professor evaluation
- Journal entry
- Present: a workshop; a learning encounter
- Write a paper, a prècis, an annotated bibliography
- Show resource file(s), scrap book(s), summary report
- Prepare: an audio tape; slides and commentary; a video tape

APPENDIX B

ENTRY COMPETENCY SCALE PED 3103

Knowledge of and ability to apply the basic fundamentals of curriculum theory to the implementation of curriculum in the classroom (3103)	0 1 2 3 4 5 low required high
Ministry Curriculum Implementation model in Ontario	0 1 2 3 4 5 Scale of competency acquisition:
Aims and Objectives Lesson plans Unit plans	0 1 2 3 4 5 Scale of competency acquisition:
Centres Themes Assignment cards Flow charts	0 1 2 3 4 5 Scale of competency acquisition:
Tyler, Taba, Bruner, Goodlad, Bloom	0 1 2 3 4 5 Scale of competency acquisition:
Testing and Evaluation Research Techniques in Education	0 1 2 3 4 5 Scale of competency acquisition:
School - Community relationships	0 1 2 3 4 5 Scale of competency acquisition:
Curriculum Implications for lifelong learning in the classroom setting	0 1 2 3 4 5 Scale of competency acquisition:

KNOWLEDGE OF AND ABILITY TO APPLY THE BASIC FUNDAMENTALS OF CURRICULUM THEORY TO THE IMPLEMENTATION OF CURRICULUM IN THE CLASSROOM (3103)		TYLER TABA GOODLAD BLOOM BRUNER	AIMS AND OBJECTIVES LESSON PLANS UNIT PLANS	CENTRES THEMES FLOW CHARTS ASSIGNMENT CARDS	MINISTRY CURRICULUM IMPLEMENTATION MODEL IN ONTARIO	TESTING AND EVALUATION IN THE SCHOOL SETTING RESEARCH TECHNIQUES IN EDUCATION	SCHOOL COMMUNITY RELATIONSHIPS	CURRICULUM IMPLICATIONS FOR LIFELONG LEARNING IN THE CLASSROOM SETTING	PED 3103

WHAT AM I GOING TO LEARN? (OBJECTIVES)	HOW AM I GOING TO LEARN IT? (RESOURCES AND STRATEGIES)	HOW AM I GOING TO DEMONSTRATE THAT I HAVE LEARNED IT? (EVIDENCE AND VERIFICATION)	TARGET FOR COMPLETION

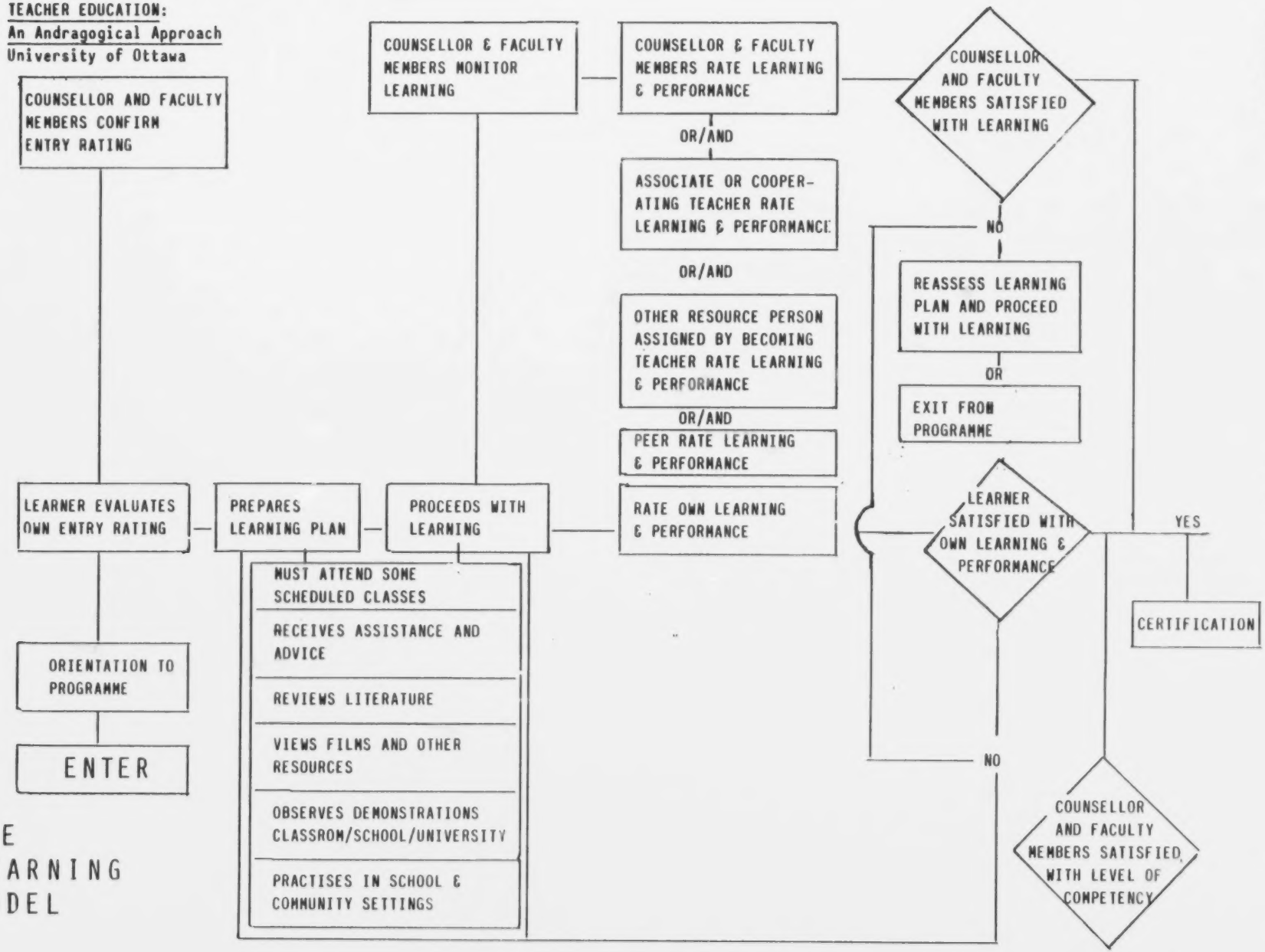
LEARNER _____ FACULTY MEMBER _____ DATE COMPLETED _____ FINAL MARK _____

APPENDIX C

57

58

TEACHER EDUCATION:
An Andragogical Approach
University of Ottawa


COUNSELLOR AND FACULTY MEMBERS CONFIRM ENTRY RATING
LEARNER EVALUATES OWN ENTRY RATING
ORIENTATION TO PROGRAMME
ENTER
PREPARES LEARNING PLAN
MUST ATTEND SOME SCHEDULED CLASSES
RECEIVES ASSISTANCE AND ADVICE
REVIEWS LITERATURE
VIEWS FILMS AND OTHER RESOURCES
OBSERVES DEMONSTRATIONS CLASSROM/SCHOOL/UNIVERSITY
PRACTISES IN SCHOOL & COMMUNITY SETTINGS
PROCEEDS WITH LEARNING
COUNSELLOR & FACULTY MEMBERS MONITOR LEARNING
RATE OWN LEARNING & PERFORMANCE
COUNSELLOR & FACULTY MEMBERS RATE LEARNING & PERFORMANCE
OR/AND
ASSOCIATE OR COOPERATING TEACHER RATE LEARNING & PERFORMANCE
OR/AND
OTHER RESOURCE PERSON ASSIGNED BY BECOMING TEACHER RATE LEARNING & PERFORMANCE
OR/AND
PEER RATE LEARNING & PERFORMANCE
LEARNER SATISFIED WITH OWN LEARNING & PERFORMANCE
YES
NO
CERTIFICATION
COUNSELLOR AND FACULTY MEMBERS SATISFIED WITH LEARNING
NO
REASSESS LEARNING PLAN AND PROCEED WITH LEARNING
OR
EXIT FROM PROGRAMME
COUNSELLOR AND FACULTY MEMBERS SATISFIED WITH LEVEL OF COMPETENCY

59 THE LEARNING MODEL

60

PART VII

DATA RETRIEVAL

Data Retrieval

The following data were retrieved for two main purposes:

1. To address generated HYPOTHESES related to:
    1. LOCUS OF CONTROL;
    2. GROWTH OF EMPATHY;
    3. SELF-CONCEPT;
    4. PSYCHOLOGICAL DIFFERENTIATION;
    5. LEVEL OF SELF-DIRECTEDNESS.
2. To permit PROGRAMME EVALUATION through the examination of:
    1. TEACHER EDUCATION PROGRAMME SATISFACTION SCALE INCLUDING FOURTEEN ITEMS TO BE RATED ACCORDING TO A SEMANTIC DIFFERENTIAL SCALE;
    2. A MODEL TWO PROGRAMME EVALUATION FORM;
    3. PRACTICAL FIELD EXPERIENCES EVALUATIONS.

PLEASE NOTE:

In the following pages reference is made to MODEL ONE and MODEL TWO. MODEL ONE refers to the regular teacher education programme within the Primary-Junior panel. This particular programme has been in existence for the past twelve years. The programme is based on the principles outlined by Arthur Combs in his work related to a humanistic teacher education programme. The programme consists of regularly scheduled classes based on meeting the perceived needs of candidates. Evaluation procedures for each course are largely determined by the professors.

MODEL TWO refers to the alternative programme in teacher education within the Primary-Junior panel. This particular programme has been in existence for the past three years. The programme is based on the principles outlined by Arthur Combs in his work related to a humanistic teacher education programme. The programme consists of a limited number of scheduled classes

and considerable decision making on the part of candidates regarding the HOW, WHEN and WHERE to acquire the expected competencies. Evaluation procedures for each course are largely the responsibility of the candidates. This particular programme is an attempt to permit learners to move in a self-directed manner to prepare for life-long learning.

As a result of the acceptance of the three year proposal regarding the alternative teacher education programme, opportunities for the retrieval of data related to research hypotheses and programme evaluation presented themselves.

The following information is presented not in detailed form, but rather as an indication to the reader of the material gathered.

Research Hypotheses

A. Locus of Control

Locus of control defines a person's generalized locus of control orientation. Locus of control is a person's perception of the connection between their behaviour and subsequent reinforcements or outcomes. If a person believes that the reinforcement they experience is the direct result of their own behaviour then they are said to have an INTERNAL locus of control orientation. If a person believes that reinforcements they experience are a result of luck, chance, or another person, they are said to have an EXTERNAL locus of control orientation. Research has shown that a person's locus of control orientation does have a definite impact on how she will behave.

The Rotter I-E Scale was administered to candidates in the Model One format and the Model Two format in 1984-85; 1986-86; and 1986-87.

These Hypotheses were formulated for investigation.

I. MODEL TWO CANDIDATES WILL BE MORE INTERNAL THAN MODEL ONE CANDIDATES;

II. MODEL TWO CANDIDATES WILL MOVE TOWARDS MORE INTERNAL LOCUS OF CONTROL.

Collected data indicated:

1984-85 (i) support for the hypothesis that Model Two candidates will be more internal than Model One candidates,

(ii) support for the hypothesis that Model Two candidates did move towards more internal locus of control.

1985-86 (i) that Model One candidates were more internal than Model Two candidates

(ii) that although candidates in both models moved towards more internal locus of control, the shift by Model Two candidates was greater.

1986-87 These data are presently being analyzed.

B. Growth of Self-Concept

An individual's self-concept has been demonstrated to be highly influential in much of his behaviour.

The Tennessee Self-Concept Scale was administered to all candidates in the Model One and the Model Two formatsin 1984-85 and 1985-86.

This hypothesis was formulated for investigation.

MODEL TWO CANDIDATES WILL DEMONSTRATE GREATER GAINS IN SELF-CONCEPT THAN MODEL ONE CANDIDATES.

Collected data indicated:

1984-85 that although candidates from both models made gains in self-concept, Model Two candidates showed greater gains.

1985-86 that although significant gains in all areas of self-concept were indicated for both Model One and Model Two candidates, there was no significant difference between the two groups. However, on several of the individual factors, Model Two candidates showed greater gains.

C. Growth of Empathy

Empathy is believed by many teacher educators to be a significant quality as one attempts to become an excellent facilitator of learning.

The COMREY PERSONALITY SCALE was administered to all candidates in the Model One format and the Model Two format in 1984-85; 1985-86; and 1986-87.

This hypothesis was formulated for investigation.

ALL CANDIDATES WOULD SHOW AN INCREASE ON THE EMPATHY VERSUS EGOCENTRISM SUBSCALE OF THE COMREY PERSONALITY SCALE.

Collected data indicated:

1984-85 that there was a general positive increase towards greater empathy among the becoming teachers,

1985-86 a mean shift towards less empathy,

1986-87 these data are presently being analyzed.

D. Psychological Differentiation

The test administered assessed a person's ability to break up an organized visual field in order to keep part of it separate from the field. The test determined the field-dependence-independence of candidates. A person who experiences difficulty disembedding simple figures from complex designs (field dependent) tends to do less well in solving that class of problems which require isolating an essential element from the context in which it is presented and using it in a different contex (field independent).

The GROUP EMBEDDED FIGURES TEST was administered to candidates in the Model One and Model Two formats in 1984-85; 1985-86; 1986-87.

This hypothesis was formulated for investigation.

FIELD DEPENDENT CANDIDATES WILL CHOOSE MODEL ONE AND FIELD INDEPENDENT CANDIDATES WILL CHOOSE MODEL TWO.

Collected data indicated:

1984-85 Model One candidates were almost equally composed of field independent and field dependent subjects while Model Two candidates were more likely to be field independent,

1985-86 that there was no significant difference between the Model One candidates and the Model Two candidates,

1986-87 these data are presently being analyzed.

E. Level of Self-Directedness

The CHEREN PROGRAMME PLANNING AND IMPLEMENTATION COMPETENCIES SCALE was administered to all candidates in the Model Two format in 1985-86; 1986-87.

This hypothesis was formulated for investigation.

MODEL TWO CANDIDATES WOULD DEMONSTRATE AN INCREASE IN THEIR PERCEPTION OF THEIR LEVEL OF SELF-DIRECTEDNESS.

Collected data indicated:

1985-86; 1986-87.

that all Model Two candidates demonstrated an increase in their perception of their level of self-directedness.

(APPENDIX E)

APPENDIX E

CHEREN'S COMPETENCY IMPLEMENTATION GUIDE

A 17 ITEM SCALE DESIGNED TO ASSESS AN INDIVIDUAL'S PLANNING & IMPLEMENTATION COMPETENCIES. EACH ITEM DESCRIBES A COMPETENCE & SUBJECTS RATE THEIR LEVEL OF PROFICIENCY WITH THE USE OF A 5 POINT SCALE RANGING FROM "NO KNOWLEDGE OR SKILL" TO EXPERT KNOWLEDGE OR SKILL". THIS SCALE WAS GIVEN TO THIRTY MODEL TWO CANDIDATES ON TWO SEPARATE OCCASIONS DURING THE 1985-86 ACADEMIC YEAR & TO TWENTY-FIVE CANDIDATES DURING THE 1986-87 ACADEMIC YEAR IN SEPTEMBER AND APRIL. THIS CONSTITUTED A PRE-TEST POST-TEST FORMAT FOR EXAMINING THE IMPACT OF THE MODEL TWO PROGRAMME UPON THE SUBJECT'S LEVEL OF SELF-DIRECTION.

ITEM	SEPT. RATING	APRIL RATING	+ OR -
1) ABILITY TO ASSESS MY DEVELOPMENTAL NEEDS & TRANSLATE THESE INTO CLEAR LONG TERM AND SHORT TERM ACADEMIC OR WORK-BASED DEVELOPMENTAL GOALS AND OBJECTIVES.	2.4	4.3	+ 1.9
2) ABILITY TO ORDER MY ACADEMIC OR DEVELOPMENTAL GOALS & OBJECTIVES IN PRIORITY & TO DEVELOP AN INITIAL SCHEDULE FOR THEIR ACHIEVEMENT.	2.5	4.2	+ 1.7
3) ABILITY TO SET ACHIEVABLE GOALS.	3.0	4.3	+ 1.3
4) ABILITY TO DESIGN A WELL-BALANCED PROGRAMME OF STUDY OR DEVELOPMENTAL PLAN.	2.6	4.2	+ 1.6
5) ABILITY TO DESIGN SPECIFIC LEARNING PROJECTS OR DEVELOPMENTAL PROJECTS.	2.6	4.2	+ 1.6
6) ABILITY TO IDENTIFY POSSIBLE RESOURCES.	2.8	4.5	+ 1.7
7) ABILITY TO ASSESS & SELECT APPROPRIATE LEARNING RESOURCES.	2.6	4.4	+ 1.8
8) ABILITY TO INITIATE AND CONDUCT EFFECTIVE EXPLORATORY NEGOTIATIONS WITH PROSPECTIVE LEARNING RESOURCE PEOPLE.	2.6	4.2	+ 1.6
9) ABILITY TO NEGOTIATE & RENEGOTIATE AS NECESSARY, SUCCESSFUL RELATIONSHIPS WITH APPROPRIATE LEARNING RESOURCE PEOPLE.	2.7	4.2	+ 1.5
10) ABILITY TO NEGOTIATE OPPORTUNITIES TO USE THE METHODS OF LEARNING THAT ARE MOST COMFORTABLE & EFFECTIVE FOR ME IN THE PURSUIT OF NEW SKILLS AND KNOWLEDGE.	2.5	4.4	+ 1.9
11) ABILITY TO INITIATE INTERVENTIONS DURING FORMAL & INFORMAL LEARNING EXPERIENCES DESIGNED TO MEET WHAT IS HAPPENING TO BETTER MEET MY NEEDS (BOTH IN TERMS OF CONTENT AND PROCESS).	2.4	4.2	+ 1.8
12) ABILITY TO SHAPE MY LEARNING TO THE USES AND APPLICATIONS I HAVE IN MIND FOR IT.	2.6	4.4	+ 1.8
13) ABILITY TO MANAGE MY TIME EFFECTIVELY.	2.5	4.0	+ 1.5
14) ABILITY TO MANAGE STRESS EFFECTIVELY.	2.7	3.9	+ 1.2
15) ABILITY TO IDENTIFY & ASSESS LEARNING BLOCKS, IF & WHEN THEY ARISE IN THE COURSE OF MY LEARNING AND DEVELOPMENTAL ACTIVITIES.	2.4	4.0	+ 1.6
16) ABILITY TO DEVELOP SUITABLE STRATEGIES FOR DEALING WITH LEARNING BLOCKS AS FAST AS POSSIBLE, WORKING DIRECTLY WITH THEIR CAUSES.	2.3	4.1	+ 1.8
17) ABILITY TO DOCUMENT MY LEARNING IN A VARIETY OF MEDIA.	2.3	4.2	+ 1.9

APPENDIX E

Observations

1. All Model Two candidates perceived an improved level of proficiency in in all seventeen items.

2. The average increase from September to April overall was 1.7 points which indicates a significant perceived improvement.

3. The following items were perceived by candidates as those areas where greatest improvement occurred.

a) ABILITY TO ASSESS MY DEVELOPMENTAL NEEDS AND TRANSLATE THESE INTO CLEAR LONG TERM AND SHORT TERM ACADEMIC OR WORK-BASED DEVELOPMENTAL GOALS AND OBJECTIVES (+ 1.9)

b) ABILITY TO NEGOTIATE OPPORTUNITIES TO USE THE METHODS OF LEARNING THAT ARE MOST COMFORTABLE AND EFFECTIVE FOR ME IN THE PURSUIT OF NEW SKILLS AND KNOWLEDGE (+ 1.9)

c) ABILITY TO DOCUMENT MY LEARNING IN A VARIETY OF MEDIA (+ 1.9)

4. The following item was perceived by candidates as that area where least improvement occurred.

ABILITY TO MANAGE STRESS EFFECTIVELY (+ 1.2)

Teacher Education Programme Satisfaction Scale 1986-87

All candidates enrolled in the Primary-Junior panel fo the teacher education programme (1986-87) were invited to complete the Teacher Education Programme Satisfaction Scale.

This scale includes:

a) the request that each candidate judge their programme against a series of descriptive scales. Fourteen categories are listed in a semantic differential manner for candidate rating;

b) the request that each candidate indicate the degree of their satisfaction with the particular programme in which they were enrolled on a 0 to 50 scale ranging from great dissatisfaction to great satisfaction.

Data gathered from the ratings on the 0-50 satisfaction scale follow:

TABLE 1

	Number of replies	0-39	40-50	46-50	Av.
MODEL ONE (the regular programme)	43 of 51 (86%)	10	32	1	40.1
MODEL TWO (an alternative programme)	25 of 26 (96%)	1	24	1	42.9

Observations from this data show:

a) an average rating of at least 40 out of 50 in both Model One and Model Two which seems to indicate a positive reaction to each programme on a 0-50 scale;

b) Model Twos have an overall higher rating than Model Ones.

Data gathered from the ratings ranging from 1 to 7 where the 1 to 3 indicates generally a negative rating; a 4 as a neutral rating; and 5 to 7 as a generally positive rating are presented.

TABLE 2

SEMANTIC DIFFERENTIAL SCALE	MODEL ONE	MODEL TWO
VALUABLE VS WORTHLESS	6.4	6.6
DEEP VS SHALLOW	5.2	5.6
POSITIVE VS NEGATIVE	6.5	6.5
IMPORTANT VS UNIMPORTANT	6.3	6.6
RELEVANT VS IRRELEVANT	6.2	6.6
SENSITIVE VS INSENSITIVE	6.2	6.1
PLEASANT VS UNPLEASANT	6.2	6.2
SUCCESSFUL VS UNSUCCESSFUL	6.2	6.6
INTERESTING VS BORING	5.7	6.4
STRONG VS WEAK	5.3	6.1
MEANINGFUL VS MEANINGLESS	6.0	6.5
FAIR VS UNFAIR	6.3	6.0
COMPLETE VS INCOMPLETE	5.3	5.8
ACTIVE VS PASSIVE	6.0	6.6

Observations from the data collected show:

a) MODEL ONES show 10 ratings of 6 or higher which on a 7 point scale indicate a positive trend;

b) MODEL TWOS show 11 ratings of 6 or higher which on a 7 point scale indicate a positive trend;

c) MODEL ONES show a higher rating in two of the fourteen categories;

d) MODEL TWOS show a higher rating in ten of the fourteen categories.

Model Two Format

Three Years 1984-85; 1985-86; 1986-87 Evaluation Form

Candidates enrolled in the Model Two format were invited to complete a programme evaluation form. The following data represents results over the three years of the pilot project.

62 candidates completed the form representing 78 percent of the possible returns.

TABLE 1

My overall assessment of the Model Two format is:		
EXCELLENT	43	(69%)
GOOD	18	(26%)
ADEQUATE	1	(5%)
POOR	-	(-)
VERY POOR	-	(-)

TABLE 2

In order of significance of candidate work in Model Two were the following activities (question asked only in 1985-86; 1986-87).	
1. Working with a group of peers	(430)
2. Working alone	(423)
3. Working with a peer	(400)
4. Working in the library	(364)
5. Working in the field (other than field studies & practical field experiences)	(356)
6. Scheduled on-campus classes	(275)
7. Working with counsellor	(263)
8. Working with outside agencies	(229)
9. Working in resource room	(213)
10. Working with individual professors	(192)
11. Working with A.V. Aids	(135)

Practical Field Experiences 1986-87

Each candidate enrolled in the Primary Junior Panel (both Model One and Model Two) was required to participate in four two-week periods of practical field experiences. Two of these two-week blocks, common to all candidates, were at the primary level (K-3) and two two-week blocks at the junior level (4-6).

Associate teachers, with whom the candidates work during these practical field experiences, were solely responsible for the mark awarded to each candidate. This mark was determined on a standard evaluation form and ranged from 0 to 100.

Initially these marks were examined and summarized in order to ensure that Model Two candidates enrolled in the alternative teacher education pro-

gramme were receiving evaluations at least as satisfactory as candidates enrolled in the regular programme (Model One). Indeed, if it had been discovered that Model Two candidates were not performing as well as Model One candidates, the alternative programme would need to be altered, adjusted, or possibly cancelled. Interestingly enough, the results observed in Table 1 speak for themselves.

Primary Junior Evaluations

PRACTICAL FIELD EXPERIENCE #1:

GRADE	MODEL ONE	MODEL TWO
90-100	27 (53%)	22 (85%)
80- 89	19 (37%)	3 (12%)
70- 79	4 (8%)	1 (3%)
60- 69	1 (2%)	- -
Overall Average	88%	92%

PRACTICAL FIELD EXPERIENCE #2:

GRADE	MODEL ONE	MODEL TWO
90-100	25 (50%)	22 (85%)
80- 89	22 (44%)	3 (12%)
70- 79	2 (4%)	1 (3%)
60- 69	1 (2%)	- -
Overall Average	88%	92%

PRACTICAL FIELD EXPERIENCE #3:

GRADE	MODEL ONE	MODEL TWO
90-100	31 (61%)	18 (69%)
80- 89	16 (31%)	8 (31%)
70- 79	3 (6%)	- -
60- 69	1 (2%)	- -
Overall Average	89%	92%

PRACTICAL FIELD EXPERIENCE #4:

GRADE	MODEL ONE	MODEL TWO
90-100	33 (65%)	24 (92%)
80- 89	16 (30%)	2 (8%)
70- 79	2 (5%)	- -
60- 69	- -	- -
Overall Average	91%	94%

Conclusion

In its pilot stage, this programme has demonstrated a capacity to bring together in dynamic and lifegiving fashion the major players in the field of preservice teacher education: the becoming teacher, the school community and the faculty of education.

This was accomplished through its focus on learning, which affirmed the common bond that unites all three groups in a community of learners.

Indeed, this pilot programme marks a significant step in our journey as a faculty toward a more integrated concept of teacher education; one with the potential to empower future teachers with the vision, attitudes and skills required for excellence in the facilitation of life-long learning.

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